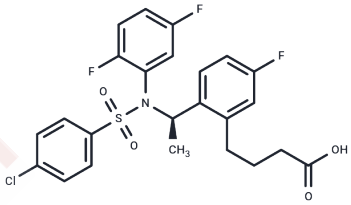
Data Sheet (Cat.No.T14673)

TargetMol

BMS 299897

Chemical Properties



CAS No. : 290315-45-6

Formula: C24H21ClF3NO4S

Molecular Weight: 511.94

Storage: Store at low temperature,Keep away from direct sunlight
Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	BMS 299897 is a sulfonamide γ-secretase inhibitor with an IC50 of 7 nM for inhibiting Aβ production in HEK293 cells stably overexpressing amyloid precursor protein (APP).
Targets(IC50)	Beta Amyloid,Gamma-secretase
In vitro	BMS-299897 (1 μM) decreases these peptides to levels ranging from 20 to 50% of the vehicle control. Furthermore, it leads to a reduction in the proportion of QD-BDNF signals moving in the retrograde direction (p=0.0198) while concurrently increasing the proportion of signals moving in the anterograde direction (p=0.0147).[2]
In vivo	BMS-299897 (0.1-1 nmol/mouse; male Swiss mice; one week) blocks the increase in Aβ1-42 content and decreases Aβ1-40 levels significantly. The compound does not affect the Aβ25-35-induced increase in hippocampal lipid peroxidation. Behaviorally, BMS-299897 blocks the Aβ25-35-induced deficits in spontaneous alternation or novel object recognition, using a 1 h intertrial time interval. The co-administration of the γ-secretase inhibitor BMS-299897, in the 0.1-1 μmol/mouse dose range, completely blocks the Aβ25-35-induced increase in Aβ1-42 content.[1]

Solubility Information

Solubility	DMSO: 27 mg/mL (52.74 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (3.91 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.9534 mL	9.7668 mL	19.5335 mL
5 mM	0.3907 mL	1.9534 mL	3.9067 mL
10 mM	0.1953 mL	0.9767 mL	1.9534 mL
50 mM	0.0391 mL	0.1953 mL	0.3907 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Meunier J, et al. The γ-secretase inhibitor 2-[(1R)-1-[(4-chlorophenyl)sulfonyl](2,5-difluorophenyl) amino]ethyl-5-fluorobenzenebutanoic acid (BMS-299897) alleviates Aβ1-42 seeding and short-term memory deficits in the Aβ25-35 mouse model of Alzheimer's disease. Eur J Pharmacol. 2013;698(1-3):193-199.

Weissmiller AM, et al. A γ-secretase inhibitor, but not a γ-secretase modulator, induced defects in BDNF axonal trafficking and signaling: evidence for a role for APP. PLoS One. 2015;10(2):e0118379.

Zheng M, et al. Studies on the pharmacokinetics and metabolism of a gamma-secretase inhibitor BMS-299897, and exploratory investigation of CYP enzyme induction. Xenobiotica. 2009;39(7):544-555.

Xue YJ, et al. Liquid-liquid extraction of strongly protein bound BMS-299897 from human plasma and cerebrospinal fluid, followed by high-performance liquid chromatography/tandem mass spectrometry. J Pharm Biomed Anal. 2007;43(5):1728-1736.

Anderson JJ, et al. Reductions in beta-amyloid concentrations in vivo by the gamma-secretase inhibitors BMS-289948 and BMS-299897. Biochem Pharmacol. 2005;69(4):689-698.

Zhang D, et al. In vitro and in vivo metabolism of a gamma-secretase inhibitor BMS-299897 and generation of active metabolites in milligram quantities with a microbial bioreactor. Curr Drug Metab. 2006;7(8):883-896.